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10/529,778	03/30/2005	Michael A. Epstein	US020358US	2264

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EXAMINER	
SHIFERAW, ELENI A	
ART UNIT	PAPER NUMBER
2436	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,778	EPSTEIN, MICHAEL A.	
	Examiner	Art Unit	
	ELENI A. SHIFERAW	2436	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-21 are pending.

Oath/Declaration

2. The corrected Application Data Sheet submitted on 11/12/2008 is duly noted.

Response to Amendments/Arguments filed on 11/11/2009

3. Applicant argues not to file Terminal Disclaimer for the obviousness double patenting rejection until one of the application is allowed. The examiner herein maintains the obviousness type Double Patenting rejection.

4. The 101 rejection is withdrawn in view of applicant's argument.

Regarding argument the applied references failure to disclose a response from a target node that includes a measure of processing time required to generate the response and fail to teach or suggest determining the proximity of the target node based on a difference between a measure of query response time and the measure of processing time, argument is not persuasive, to only claims 1 and 15, argument is not persuasive because Fletcher et al. discloses determining the proximity of the target node based on a communication time that depends upon a difference between the measure of query-response time and the measure of processing time using time-stamps included the response data message (see on col. 18 lines 28-44). The time-stamps are measure of processing time (see Fletcher et al. col. 18 lines 13-17) that discloses "time-stamps provide an accurate measure of when the data packets are transmitted and received" by each of the computer systems. The measure of when the data packets are transmitted and received is interpreted as a measure of processing time. These time-stamps are applied on request data

packet 390 and response data packet 395 and the time-stamps are used as the basis for generating performance statistics (see Fletcher et al. col. 10 lines 42-48, col. 14 lines 51-56, and col. 10 lines 59-62). Fletcher et al., (on figs. 3 and 8), discloses the client computer system 300, server computer system 350, request data packet 390 and response data packets 395 and the request and response data packets are exchanged between the client and server computer systems. Col. 23 lines 65-col. 24 lines 5 of Fletcher et al. discloses that applying the time-stamp on the response data packet by the server computer system and the client computer system receiving the time-stamped response data packet. Fletcher et al., on col. 10 lines 42-46 and col. 15 lines 5-6, further discloses each response data packet 395 comprising time-stamp. Fletcher et al., on col. 9 lines 7-12, also teaches that the response packet 295 is generated, by server computer system, based on the request packet 290 from the requester (client computer system). Therefore Fletcher et al. clearly discloses providing a measure of processing time in a response from a target node to a source node. Applicant's argument Fletcher et al. discloses a time stamp associated with a message at the time it enters the protocol stack the sending system and the time it exits the protocol stack is not persuasive based on the above argument and also Fletcher et al. disclosing extra teachings does not mean that it doesn't teach the current cited limitation. Every single limitation as disclosed herein below and argued is taught by Lundkvist and Fletcher et al. the network/protocol latency is calculated and determined based on the time-stamps of each correlated data packets (see par. 18 lines 28-44).

Regarding argument the references failure to teach or suggest determining the proximity of the target node based on a difference between a measure of query response time and the

measure of processing time, argument is not persuasive to claim 9 and its intervening claims since it is not claimed.

Regarding argument:

> "Fletcher discloses two messages, a request and a response. When the request is sent, a time-stamp T1 is assigned at the client, and when it is received, a time-stamp T2 is assigned at the server; when the response is sent, a time-stamp T3 is assigned at the server, and a time-stamp T4 is assigned at the client. It is significant to note that the response that is sent from the server (the 'target' node) is only associated with time-stamp T3. It is impossible to determine the processing time at the server based on this single time-stamp T3, and thus this time-stamp T3 cannot be said to correspond to a measure of the processing time.
>
> As disclosed by Fletcher, in order to determine the processing time, a monitoring system must receive a record of the request, and corresponding time-stamps T1 and T2 from the server/target, then correlate this request to a record of the response, and corresponding time-stamps T3 and T4 from the client, then subtract T2 from T3 to determine a measure of the processing time. The applicants provide a technique that eliminates this complex process of Fletcher, by directly providing a measure of the processing time in the response from the server."

Argument is not certainly persuasive because (see Fletcher et al. col. 18 lines 13-17 or lines 28-63, figs. 8-11 and claim 9) discloses "time-stamps provide an accurate measure of when the data packets are transmitted and received" by each of the computer systems. It seems like applicant is supporting the claims by arguments while the office does not read the disclosure into the claims. The claims as cited are reasonably and broadly interpreted insight of disclosure. Determining processing time at the server as claimed is clearly addressed by the examiner.

Regarding argument regarding the words 'proximity' or 'distance' not found in Fletcher et al. is not persuasive it seems like the applicant is looking for the exact word however Fletcher discloses applying time-stamps on request data packet 390 and response data packet 395 and using the time-stamps as the basis for generating performance statistics for application response

time (see Fletcher et al. col. 10 lines 42-48, col. 14 lines 51-56, col. 18 lines 57-62, and col. 10 lines 59-62).

Every single limitation is reasonably addressed by the examiner and the rejection(s) to claims 1-21 is/are maintained.

Response to Amendments/Arguments filed on 04/20/2009

5. Applicant's arguments filed 04/20/2009 have been fully considered but they are not persuasive for the 103 rejection made but persuasive for the double patenting rejection.

Regarding argument the combination of Lundkvist and Fletcher fail to disclose "providing a measure of processing time in a response from a target node to a source node", as claimed in claims 1, 9, and 15, argument is not persuasive because, as the examiner cited, on col. 18 lines 28-44, Fletcher et al. discloses determining the proximity of the target node based on a communication time that depends upon a difference between the measure of query-response time and the measure of processing time using time-stamps included the response data message. The time-stamps are measure of processing time (see col. 18 lines 13-17 of Fletcher et al.) that discloses "time-stamps provide an accurate measure of when the data packets are transmitted and received" by each of the computer systems. The measure of *when the data packets are transmitted and received is interpreted* as a measure of *processing time*. These time-stamps are applied on request data packet 390 and response data packet 395 and the time-stamps are used as the basis for generating performance statistics (see Fletcher et al. col. 10 lines 42-48, col. 14 lines 51-56, and col. 10 lines 59-62). Fletcher et al., (on figs. 3 and 8), discloses the client computer

system 300, server computer system 350, request data packet 390 and response data packets 395 and the request and response data packets are exchanged between the client and server computer systems. Fletcher et al., on col. 10 lines 42-46 and col. 15 lines 5-6, further discloses each response data packet 395 comprising time-stamp. Fletcher et al., on col. 9 lines 7-12, also teaches that the response packet 295 is generated, by server computer system, based on the request packet 290 from the requester (client computer system). Therefore providing a measure of processing time in a response from a target node to a source node is taught by Fletcher et al.

- Regarding argument:

"The Office acknowledges that Lundkvist fails to disclose providing a measure of processing time in a response from a target node to a source node relies on Fletcher for this teaching. The Office action asserts that Fletch discloses this feature at column 18, lines 28-44. The applicant respectfully disagrees with this assertion. At the cited text, Fletcher states:

> "With reference now to FIG. 11, and also to FIG. 3, an example illustrating the application of one embodiment of the present invention to request and response data packets is provided. With reference to step 1105, in this embodiment the network manager defines recognition characteristics 505 (FIG. 5) for client computer system 300 and for server computer system 350 as previously described. In steps 1110 and 1111, the recognition characteristics are applied to select data packets sent by one or the other of the computer systems. In steps 1115, 1116, 1117 and 1118, in this embodiment time-stamps T1, T2, T3 and T4 are applied to request and response data packets 390 and 395 at the end-node computer systems; that is, time-stamps T1 and T4 are applied at client computer system 300, and time-stamps T2 and T3 are applied at server computer system 395. Thus, in the present invention the time-stamps provide an accurate measure of when the data packets are transmitted and received by each of the computer systems in the computer network. Alternatively, in another embodiment time-stamps T1, T2, T3 and T4 are applied at the layered service provider to the socket calls corresponding to request and response data packets 390 and 395." (Fletcher, column 18, lines 28-44.)

As is clearly evident, the cited text does not reference a processing time, and does not reference including such a processing time within a response from a target node to a source node," remark page 7 lines 13-page 8 lines 3, argument is not persuasive because

Col. 23 lines 65-col. 24 lines 5 of Fletcher et al. clearly discloses that applying the time-stamp on the response data packet by the server computer system and the client computer system receiving the time-stamped response data packet. Fletcher et al. also teaches response data packet 395 comprising time-stamp (on col. 14 lines 66-col. 15 lines 6 and col. 10 lines 42-46). Fletcher et al. further teaches applying time-stamps on the response data packet 395 and the time-stamps are used as the basis for generating performance statistics (on col. 10 lines 42-48, col. 14 lines 51-56, and col. 10 lines 59-62). On col. 9 lines 7-12 of Fletcher et al. also described that the response packet 295 is generated, by server computer system, based on the request data packet 290 from the requester (client computer system). Therefore the response data packet comprises/includes the time-stamp in response to the request data packet from the client computer system is taught by Fletcher et al.

Regarding argument "Fletcher calculates this performance metric [query-response time] exactly to determine the proximity of one node to another" (Office action, page 5, lines 13-14). The applicant agrees with this statement, *but specifically notes that Fletcher calculates this performance metric without including a measure of processing time in the response from the target node to the host node,* as taught and claimed by the applicant. That is, Fletcher teaches an alternative scheme for calculating the query-response time that does not use a measure of processing time provided by the target node," remark page 8 lines 4-11, argument is not persuasive because the network/protocol latency is calculated and determined based on the time-stamps of each correlated data packets (see par. 18 lines 28-44). As explained above, col. 23 lines 65-col. 24

lines 5 of Fletcher et al. clearly discloses that applying the time-stamp on the response data packet by the server computer system and the client computer system receiving the time-stamped response data packet.

Regarding argument:

"In KSR Int'l. Co. v. Teleflex, Inc., the Supreme Court noted that the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and that it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed:

> "Often, it will be necessary ... to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements *in the fashion claimed* by the patent at issue. To facilitate review, this analysis should be made explicit." KSR, 82 USPQ2d 1385 at 1396 (emphasis added).

Even if one of skill in the art were to combine Lundkvist and Fletcher to improve the accuracy of Lundkvists' determination of the query-response time, the combination will not lead to a combination *in the fashion claimed* by the applicant. This combination does not teach or suggest including a measure of processing time in a response from the target node," remark page 8 lines 12-27, argument is not persuasive because a sufficient reason to combine the references is identified and provided in the previous Office action (see for e.g. page5 lines 10-14). The claims are given a broad reasonable interpretation in light of the disclosure and also in the fashion claimed.

Regarding argument "Fletcher discloses the use of four time stamps to accurately determine the query-response time. To arrive at the applicant's claimed invention from a

combination of Lundkvist and Fletcher, one of skill in the art would have to disregard Fletcher's teachings and use the alternative technique that is taught solely by the applicant,... given a combination of Lundkvist and Fletcher that provides an accurate remark page 9 lines 1-8, argument is not persuasive because Fletcher et al's four time-stamps are based on determination of the query-response time, there is no apparent reason to search for an alternative means for determining this query-response time; and, specifically, absent the applicant's disclosure, there is no apparent reason to add a measure of the response time in the response from the target node, as taught and claimed by the applicant. Accordingly, the applicant respectfully maintains that the rejection of claims 1-21 under 35 U.S.C. 103(a) over Lundkvist in view of Fletcher is unwarranted, and should be withdrawn," remark page 8 lines 28-page 9 lines 8, argument is not persuasive because the reference Fletcher reads on the claims as claimed. To differentiate overcome the reference the applicant may amend the claims. The office provided a reasonable broad interpretation, to the claims, in light of the applicant's disclosure.

Therefore the rejection(s) to claims 1-21 is/are maintained.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application

claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 2, 3, 4, 6, 7, 9, 10, 11, 12 are provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 3, 4, 5, 8, 9, 11, 12, 13, 14 of copending Application No. 10529353 in view of Liao et al. USPN 6717915 B1.

Although the conflicting claims are not identical they are not patentable distinct from each other because the instant application determines the proximity of one node to another by measuring the query-response time and the processing time. The copending application determines the proximity of one node to another by measuring a communication time. It would

be obvious to one of ordinary skill in the art at the time of the applicant's invention that the processing time and the query-response time is another way to express a communication time.

The copending application fails to disclose including processing time in the response.

However Liao et al. discloses including processing time in a response **(see col. 1 lines 61-col. 2 lines 62 and figs. 1-4)**.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Liao et al. within the system of the copending application to calculate performance proximity and enhance the network.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030184431 (Lundkvist) in view of US 6363477 (Fletcher) and in view of US 6088450 (Davis).

As to claim 1, (Original) Lundkvist discloses a method of determining proximity of a target node to a source node, comprising:

communicating a query from the source node to the target node (Lundkvist page 3, paragraph 31),

communicating a response from the target node to the source node (Lundkvist page 3, paragraph 32),

receiving the response at the source node (Lundkvist page 3, paragraph 32),

determining a measure of query-response time between communicating the query and receiving the response (Lundkvist page 3, paragraph 32). Lundkvist does not explicitly teach the response from the target node including a measure of processing time required to generate the response based on the query, and determining the proximity of the target node based on a communication time that depends upon a difference between the measure of query-response time and the measure of processing time.

However, Fletcher discloses the response from the target node including a measure of processing time/time-stamps required to generate the response based on the query **(Fletcher column 18, lines 28-63 and claim 8)**, and determining the proximity of the target node based on a communication time that depends upon a difference between the measure of query-response time and the measure of processing time **(Fletcher column 18, lines 28-63, figs. 8-11 and claim 9)**.

It would be obvious to one of ordinary skill in the art at the time of the applicant's invention to combine Lundkvist and Fletcher because Lundkvist does not specifically calculate the query-response time without subtracting the processing time to get the true network latency time but, Fletcher calculates this performance metric exactly to determine the proximity of one node to another node (Fletcher column 18, lines 57-62).

As to claim 2, (Original) Lundkvist discloses the method of claim 1, wherein the query and response correspond to at least a portion of a cryptographic key-exchange protocol (Lundkvist page 3, paragraphs 29, 31, and 32).

As to claim 3, (Original) Lundkvist discloses the method of claim 2, wherein the key-exchange protocol corresponds to a Needham-Schroeder key-exchange protocol (Lundkvist page 3, paragraph 29: a symmetric key encryption which is a type of Needham-Schroeder protocol).

As to claim 4, (Original) Lundkvist discloses the method of claim 1, wherein the query and response correspond to at least a portion of an OCPS protocol (Lundkvist page 3, paragraphs 29-34: teaches an authentication stage, a key exchange stage, a key generation stage, and a data transmission stage of the OCPS protocol).

As to claim 5, (Original) Lundkvist discloses the method of claim 1, wherein the measure of processing time at the target node is predefined (Lundkvist page 4, paragraph 0041).

As to claim 6, (Original) Lundkvist discloses the method of claim 1, wherein determining the proximity includes comparing the communication time to a threshold value that distinguishes between local and remote nodes (Lundkvist page 4, paragraph 0042 and paragraph 0049).

As to claim 7, (Original) Lundkvist discloses the method of claim 1, further including restricting communications with the target node based on the proximity (Lundkvist page 2, paragraph 0018).

As to claim 8, (Original) Lundkvist discloses the method of claim 1, wherein the response is cryptographically signed by the target node (Lundkvist page 3, paragraph 0034).

As to claims 9-21, claims 9-21 encompass the same scope of the invention as those of claims 1-8 with the additions of a target "a communication device", a target "a processor", a source "a communication device", and a source "a processor" (Lundkvist page 4, paragraph 0051).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELENI A. SHIFERAW whose telephone number is (571)272-3867. The examiner can normally be reached on Mon-Fri 6:00am-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser R. Moazzami can be reached on (571) 272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eleni A Shiferaw/
Primary Examiner, Art Unit 2436